

CLAIMS

1. Method for producing a component by reshaping a coated, preferably aluminum-coated plate of quenched and tempered steel, before reshaping in a first process step the plate being supplied to a first furnace and being austenitized there and the residence time of the plate in the first furnace being chosen such that in addition to the structure transformation an increase in the layer thickness takes place, characterized by the following process steps:
 - rapid cooling and subsequent intermediate storage of the heat treated sheet bar (1),
 - repeated, brief heating of the sheet bar (1) in a second furnace (11) to the austenitization temperature directly prior to forming into the component (5), and
 - forming and hardening of the sheet bar (1) after completed structure transformation.
2. The process as claimed in claim 1, characterized by a residence time in the first furnace (7) between nine minutes and thirty minutes.
3. The process as claimed in claim 1, wherein when the sheet bar (1) is heated again to the austenitization temperature in the second furnace (11) the residence time is chosen such that only one structure transformation takes place, but no longer an increase of layer thickness.
4. The process as claimed in claim 3, characterized by a residence time of the sheet bar (1) in the second furnace (7) from ten seconds to two and one half minutes.
5. The process as claimed in claim 1, wherein the sheet bar (1) is heated in the first furnace (7) based on electricity or gas, while heating in the second furnace (11) takes place by induction.

6. The process as claimed in claim 1, wherein the first heating takes place at the steel or sheet manufacturer, while the second heat treatment takes place at the processing company, for example a motor vehicle manufacturer.
7. The process as claimed in claim 1, wherein during the second heat treatment the sheet bar (1) is heated to different degrees over its surface.
8. The process as claimed in claim 1, wherein the sheet bar (1) before reheating in the second furnace (11) is locally reinforced by applying at least one reinforcing sheet.
9. The process as claimed in claim 1, characterized by using a tailored blank as the sheet bar (1).
10. Device for carrying out the process as claimed in one of claims 1-9, characterized by
 - a tool (4) for producing sheet bars (1) from a coil (3),
 - a first furnace (7) for initial heat treatment including inducing an increase in the layer thickness of the sheet bars (1),
 - a cooling zone (8) for the sheet bars (1),
 - an intermediate storage area for the sheet bars (1),
 - a second furnace (11) for repeated heat treatment of the sheet bars (1),
 - a forming/tempering tool (13) with a press means (14) and a cooling device (15),
 - a trimming device (17) for producing a trimmed finish contour and holes.
11. The device as claimed in claim 10, characterized by an electricity-based and/or gas-based first furnace (7) and an induction furnace (11) for the second heat treatment.

12. The device as claimed in claim 11, wherein an inductor is integrated into the transport device (10) which is located between the intermediate storage (9) and the forming/tempering tool (13).
13. The device as claimed in claim 10, wherein between the cooling zone (8) and the second furnace (11) there is a station for applying, especially by welding, at least one reinforcing sheet to the sheet bar (1).